Catalogue of American Amphibians and Reptiles.

Powell, R. 1992. *Amphisbaena gonavensis.*

Amphisbaena gonavensis Gans and Alexander

Amphisbaena innocens: Cope, 1879:273 (part).
Amphisbaena innocens gonavensis Gans and Alexander, 1962:111. Type-locality, "Point-à-Roquettes, Gonave Island, Haiti." Holotype, Peabody Museum, Yale University (PM) 3384, a male collected by Philip S. Humphreys in February-April 1959 (not examined by author).
Amphisbaena gonavensis: Thomas, 1965a:1.

• **Content.** Three subspecies are recognized: *gonavensis*, *hyporissor*, and *leberi*, but see Comment.

• **Definition.** *Amphisbaena gonavensis* is a small species (maximum known SVL 242 mm, Thomas, 1965a) with a cylindrical and slightly tapering body, rounded terminally, no fusion of head scales, 2 temporals, a short nasal suture, 199-225 body annuli in ventral count, 10-21 caudal annuli, 36-42 total segments per midbody annulus, 1-2 postgenial rows and one postmalar row of chin shields, four (rarely three) precloacal pores, 6-7 precloacal scales, and 11-14 postcloacal scales. The tail is rounded in cross section. Caudal autotomy is variable, but uncommon. Ground color is brown to purplish, darker dorsally. Ventral color may be yellowish or gray, with some scattered dark mottling.

• **Diagnosis.** *Amphisbaena gonavensis* can be distinguished from all other Hispaniolan congeners by the lack of fusion of head scales and the presence of a malar (see comments regarding the malar scale in Thomas, 1965a).

• **Descriptions.** In addition to those of Gans and Alexander (1962) and Thomas (1965a), Schwartz and Henderson (1991) provided an excellent description. Cole and Gans (1987) described the karyotype (2n=50) of *A. g. leberi.*

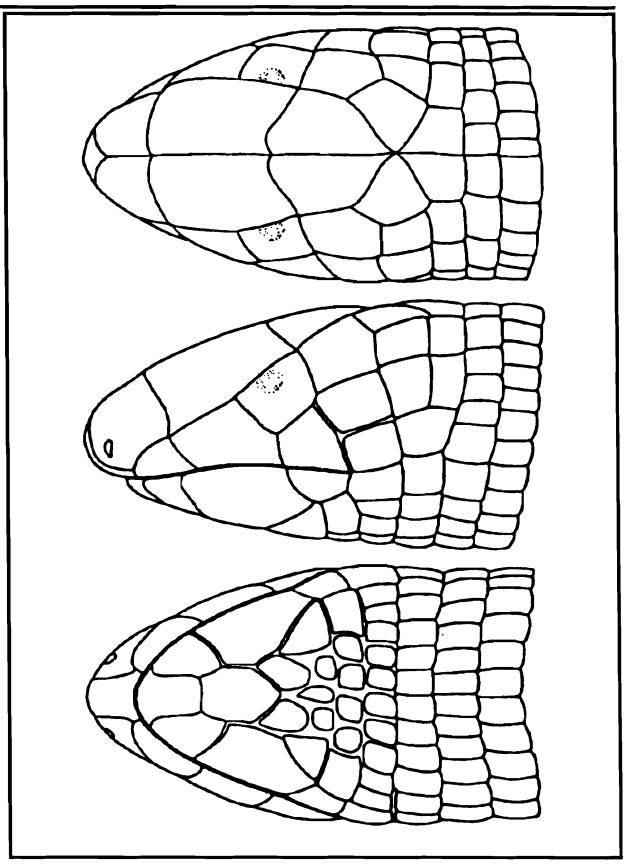
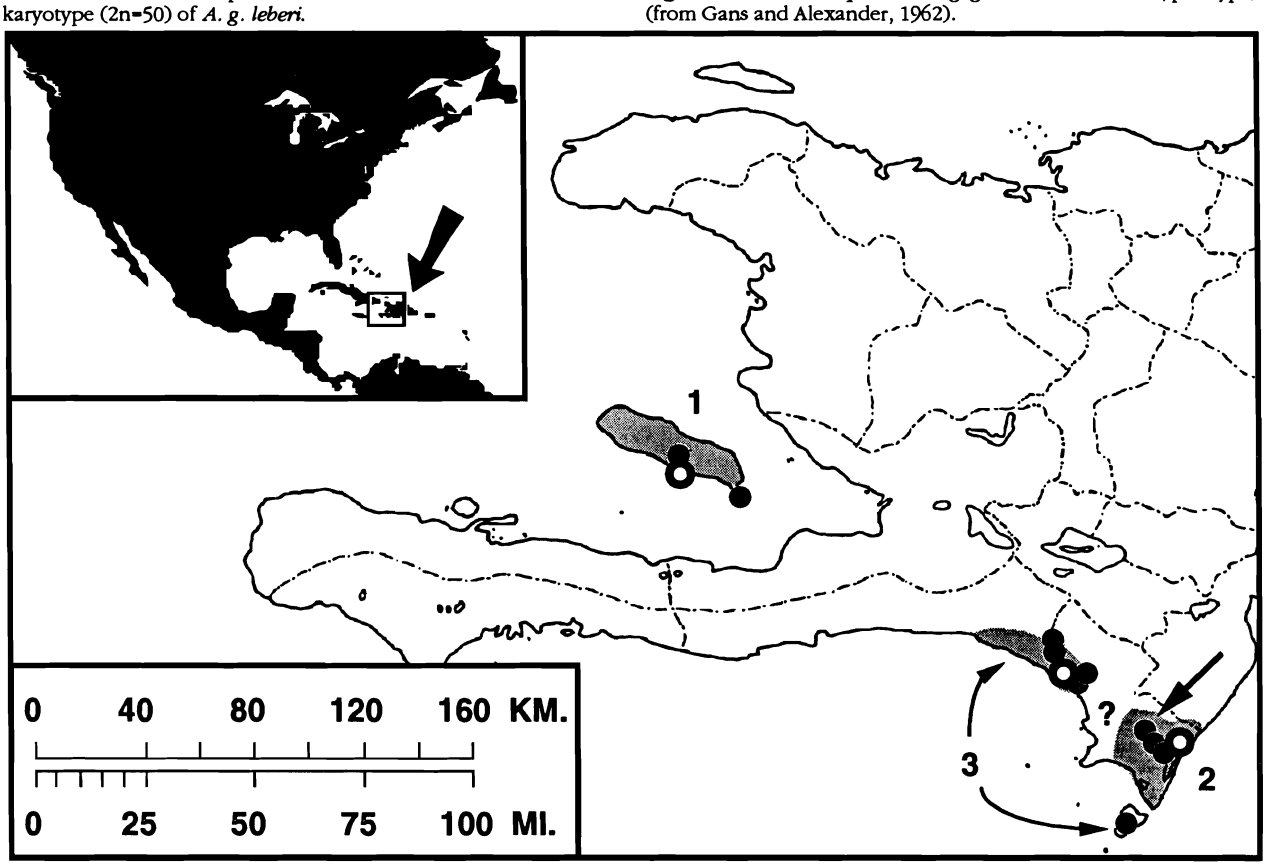


Figure 1. Head of *Amphisbaena g. gonavensis* (PM 3388, paratype) (from Gans and Alexander, 1962).



Map. Range of *Amphisbaena gonavensis* (modified from Thomas, 1965a). Open circles mark type-localities, solid circles mark other records. The question mark indicates the uncertain distribution of *A. g. leberi* in the central portion of the Peninsula de Barahona. The arrow indicates the region in which intergradation between *A. g. hyporissor* and *A. g. leberi* is known to occur.

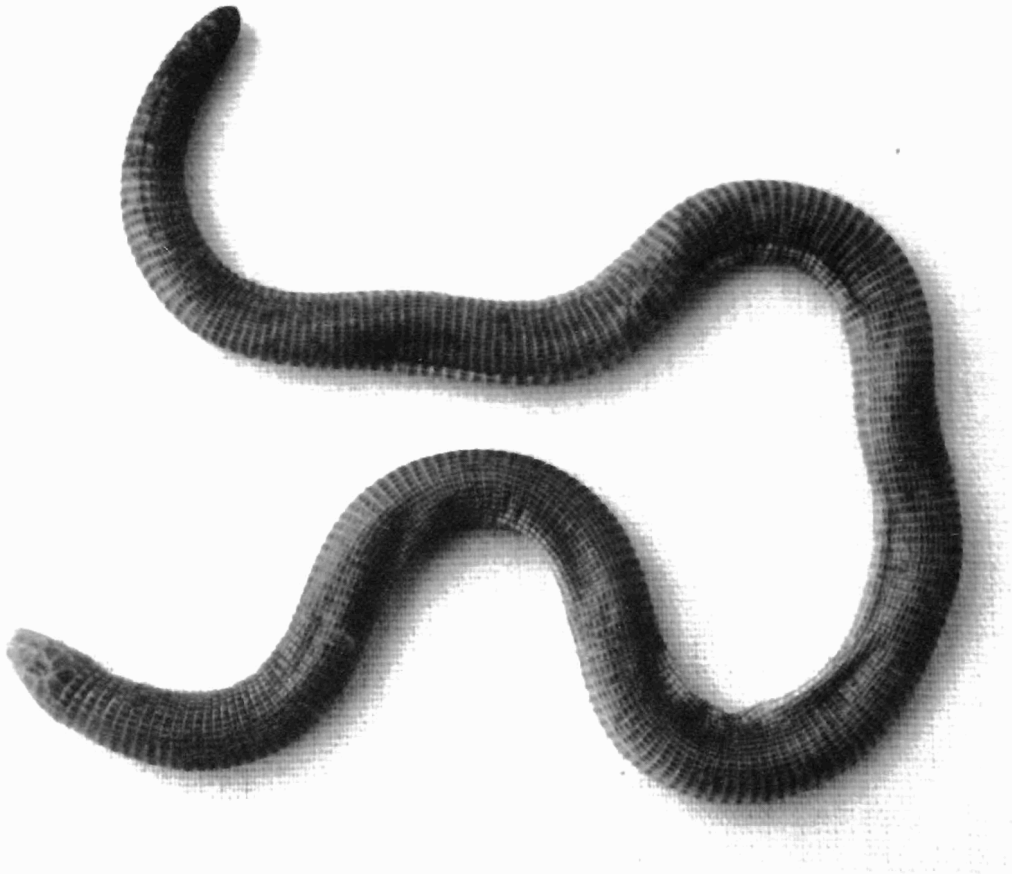


Figure 2. Adult male *Amphisbaena gonavensis hyporissor*, Bobby Witcher Memorial Collection (BWMC) 04510, from 5.5 km NW Oviedo, Pedernales Province, Dominican Republic. Photograph by author.

• **Illustrations.** Line drawings of dorsal, lateral, and ventral views of the head and a ventral view of the cloaca and tail are in Gans and Alexander (1962). Thomas (1965a) provided line drawings of ventral and dorsal views of the head and of the caudal and cloacal regions. Cole and Gans (1987) presented a photograph of the karyotype of *A. g. leberi*, and Rosenberg et al. (1991) provided a black and white photomicrograph of the hemipenis.

• **Distribution.** An Hispaniolan endemic, the species is known to occur in fossorial situations in xeric, open woodlands in the Peninsula de Barahona and on Isla Beata, República Dominicana, and Ile de la Gonâve and Ile Petite Gonâve, Haiti. The range is illustrated in Gans and Alexander (1962), Thomas (1965a), and Schwartz and Henderson (1991).

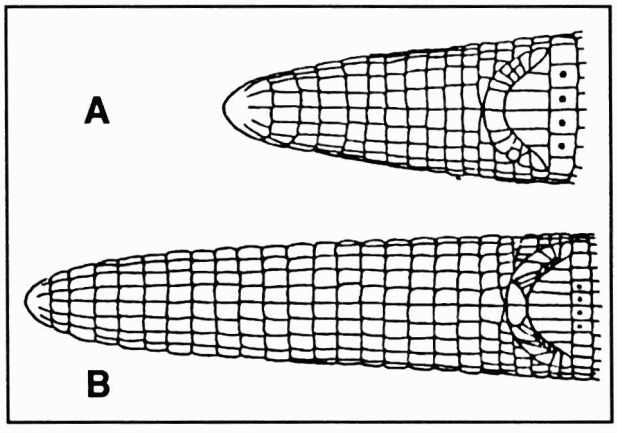


Figure 3. Ventral view of the caudal and cloacal regions of: **A**, *Amphisbaena gonavensis gonavensis* (MCZ 80291), and **B**, *Amphisbaena gonavensis leberi* (ASFS V2596) (from Thomas, 1965a). Except for median postcloacals, **B** is also typical of *A. g. hyporissor*. Median postcloacals of **A** are typical of *A. g. gonavensis* and *A. g. hyporissor*, those of **B** are diagnostic of *A. g. leberi*.

• **Fossil Record.** None.

• **Pertinent Literature.** Gans and Alexander (1962) provided an extensive discussion of zoogeographical relationships and morphological variation. Thomas (1965a) discussed relationships, zoogeography, and aspects of ecology. Schwartz (1980) characterized this species as a South Island form, but Schwartz (1971) had indicated a North Island origin. SEA/DVA (1990) provided an index of habitats in the Dominican Republic. Schwartz and Henderson (1991) summarized information on distribution and natural history. Thomas (1965b) described feeding by captive specimens, and Cusumano and Powell (1991) and White et al. (1992) food habits of specimens from the Barahona Peninsula. Thomas and Thomas (1978) provided information on photoperiodicity and circadian rhythms. Cole and Gans (1987) discussed relationships among amphisbaenians and the karyotype, which, along with that of *A. innocens* (also a Hispaniolan endemic), represents the highest diploid number of chromosomes recorded in any amphisbaenian. Rosenberg et al. (1991) described the hemipenes. Cope (1879), Stejneger (1904), and Cochran (1941) listed locality records (as *A. innocens*). The species is included in checklists and guides by Gans (1967), Schwartz and Thomas (1975), Schwartz et al. (1978), Henderson and Schwartz (1984), Henderson et al. (1984), and Schwartz and Henderson (1985, 1988).

• **Etymology.** The name *gonavensis* refers to the type-locality, the name *hyporissor* is from the Greek *hypo* (beneath) and *orysso* (to dig a trench) in reference to the habits of this taxon (R. Thomas, pers. comm.), and the name *leberi* is a patronym honoring David C. Leber, who helped collect the type-specimen of *A. g. hyporissor*.

• **Comment.** Thomas (1965a) suggested that *Amphisbaena gonavensis hyporissor* and *A. gonavensis leberi* (e.g., the main island

populations) may represent a species distinct from *A. g. gonavensis*.

1. *Amphisbaena gonavensis gonavensis* Gans and Alexander

Amphisbaena innocens: Cope 1879:273 (part). See species synonomy.
Amphisbaena innocens gonavensis Gans and Alexander, 1962:111. See species synonomy.
Amphisbaena gonavensis gonavensis: Thomas, 1965a:2. First use of combination.

• **Diagnosis.** This subspecies is characterized by apical or narrow contact of the first pair of parietals, a low number (10-12) of caudal annuli, 3 rows of postgenials, considerable penetration (35-69% of the length of the scale lying anterior to the malar-second infralabial suture) of the first row of postgenials between the genial and second infralabial, median postcloacals rectangular, and a generally pale coloration with scattered mottling.

2. *Amphisbaena gonavensis hyporissor* Thomas

Amphisbaena gonavensis hyporissor Thomas, 1965a:5. Type-locality, "13.1 mi (20.9 km) SW of Enriquillo, Pedernales Province, República Dominicana." Holotype, Museum of Comparative Zoology, Harvard University (MCZ) 77149, an adult male collected by David C. Leber and Richard Thomas on 30 July 1963 (not examined by author).

• **Diagnosis.** This subspecies is characterized by narrow contact of the first pair of parietals, a high number (19-21) of caudal annuli, 3 rows of postgenials, moderate penetration (10-30% of the length of the scale lying anterior to the malar-second infralabial suture) of the first row of postgenials between the genial and second infralabial, median postcloacals with rounded borders, and a mottled but faded coloration.

3. *Amphisbaena gonavensis leberi* Thomas

Amphisbaena gonavensis leberi Thomas, 1965a:7. Type-locality, "5 km N of Pedernales, Pedernales Province, República Dominicana." Holotype, Museum of Comparative Zoology, Harvard University (MCZ) 77218, an adult male collected by Richard Thomas on 25 June 1964 (not examined by author).

• **Diagnosis.** This subspecies is characterized by broad contact of the first pair of parietals, a high number (16-19) of caudal annuli, typically 2 rows of postgenials, little penetration (6-18% of the length of the scale lying anterior to the malar-second infralabial suture) of the first row of postgenials between the genial and second infralabial, median postcloacals with rounded borders, and a dark, uniform coloration.

• **Remarks.** Intergradation between *A. g. hyporissor* and *A. g. leberi* is known from ca. 10 km northwest of Oviedo Nuevo, Pedernales Province (Thomas, 1965a).

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